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(54) Title: MULTIFUNCTIONAL UNSYMMETRICALLY SUBSTITUTED MONOMERS AND POLYARYLENE COMPOSI-TIONS THEREFROM

(57) Abstract: A monomer suitable for use in forming low dielectric constant films in semiconductor devices comprising i) two dienophile groups (A-functional groups) attached to a single aromatic ring and ii) a second ring structure comprising two conjugated carbon-to-carbon double bonds and a leaving group L (B-functional group), characterized in that said single aromatic ring is directly covalently attached to one of the double bonded carbons of the B functional group or to a fused aromatic ring containing two such double bonded carbons of the B-functional group, and one A-functional group of one monomer is capable of reaction under cycloaddition reaction conditions with the B-functional group of a second monomer to thereby form a polymer.





## INTERNATIONAL SEARCH REPORT

International Application No //US2004/009973

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07C49/683 C08F38/00 C08G61/10 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07C Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, BEILSTEIN Data, CHEM ABS Data, WPI Data, PAJ C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with Indication, where appropriate, of the relevant passages Relevant to daim No. X J. ORG. CHEM. 1,6,7 vol. 62, no. 11, 1997, pages 3430-3431, XP002294396 Compounds 8a,8c,8d,8d' in the left-hand column on p.3431 and surrounding text. J. ORG. CHEM., vol. 62, 1997, pages 3432-3433, X 1,6,7 XP002294397 Compounds 7a,7b P,X WO 03/068825 A (DOW GLOBAL TECHNOLOGIES 1-4,6-9INC ; GODSCHALX JAMES P (US); NIU QING SHAN J) 21 August 2003 (2003-08-21) Formulae XI-XVI, XXVI, XXVII, claims 1-25; examples 22,23,26,30,31,33,36 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but \*A\* document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the 'E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority dalm(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-'O' document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. \*P\* document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 31 August 2004 07/10/2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Cooper, S



Information on patent family members

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